

ISO-GE

DeSOTO, INC.

MATERIAL SAFETY DATA SHEET

NPCA 1-72

FOR COATINGS, RESINS AND RELATED MATERIALS

(Approved by U.S. Department of Labor "Essentially Similar" to Form OSHA-20)

SECTION I

DeSOTO, INC.
Administrative and Research Center1700 South Mt. Prospect Road
Des Plaines, Illinois 60018

Emergency Telephone 312-391-9000

Product Class: POLYISOCYANATE

Comp. II
Manufacturers Code Identification

910 X 376 VOC 662

Trade Name SUPER DESOTHANE

Date of Prep 9/14/82

Supersedes 8/26/81 MSDS

***** SECTION II-HAZARDOUS INGREDIENTS *****

INGREDIENT	PERCENT* BY WEIGHT	PPM	TLV MG/M ³	LEL	VAPOR PRESSURE @20° C.
2-Ethoxyethyl Acetate-Skin**	30	50	270	1.8	2.0
Cyclohexanone	5	25	100	1.1	3.4
Methyl Ethyl Ketone	30	200	590	1.8	70
Xylene - Skin	5	100	435	1.1	10.0
Aliphatic Polyisocyanate***	35	NE	NE	NE	NE

* Percent By Weight: To nearest 5%, plus or minus 5%, for substances 5-95%;
<5.0 for substances 0.5-5%; <0.5 for substances 0.0-0.5%.

**ACGIH notice of intended change, 1982: TLV-TWA = 5 ppm.

***Hexamethylene diisocyanate (HDI) content less than 0.7%
based on resin solids at time of manufacture. However,
after 3 to 6 months storage, the free monomer content
may rise to a maximum of 1.6%.

TLV not
established
for HDI but
0.02 ppm
followed

NE = Not Established

NA = Not Applicable

***** SECTION III-PHYSICAL DATA *****

PROPERTY	MEASUREMENT
Boiling Range	176-313° F. 80-156° C. @760 MM Hg
Vapor Density	X Heavier Lighter Than Air
Weight Per Gallon	7.8 Lbs.
Percent Volatile By Volume	75
Evaporation Rate	Faster X Slower Than Ether

***** SECTION IV-FIRE AND EXPLOSION DATA *****

DOT Category FLAMMABLE LIQUID
OSHA Category FLAMMABLE LIQUID CLASS 1B
Flash Point (Closed Cup) 33° F.
 0.6° C.

Lower Explosive Limit See II

EXTINGUISHING MEDIA: Use National Fire Protection Association Class B
extinguishers (Carbon dioxide, dry chemical or foam)

UNUSUAL FIRE AND EXPLOSION HAZARDS: During a fire irritating and/or toxic
gases and aerosols from the decomposition/combustion products may be present.

SPECIAL FIRE FIGHTING PROCEDURES: Full emergency equipment should be worn.
Spray drums of material involved in fire but not themselves on fire with water
to minimize risk of rupture. Wear NIOSH approved self-contained breathing
apparatus and protective clothing to prevent contact with skin and eyes.

***** SECTION V-HEALTH HAZARD DATA *****

THRESHOLD LIMIT VALUE: See II (Not Established for Product)

EFFECTS OF OVEREXPOSURE: Inhalation: Anesthetic. Irritation of the
respiratory tract or acute nervous system depression characterized by headache,
dizziness, staggering gait, confusion, unconsciousness or coma. Others as
noted in Sec. IX.

SKIN OR EYE CONTACT: Primary Irritation.

OTHER HEALTH EFFECTS: Reproductive and blood disorders and birth defects have
been observed in tests on laboratory animals with 2-methoxyethanol, 2-
ethoxyethanol and 2-ethoxyethyl acetate. Because this product contains at
least one of these solvents, handling precautions as outlined in sections VIII
and IX should be carefully followed to avoid overexposure.

EMERGENCY AND FIRST AID PROCEDURES: Inhalation: Remove from exposure.
Restore breathing. Keep warm and quiet. Notify a physician. Skin Contact:
Wash affected areas with water. Remove contaminated clothing. Consult a
physician. Eye Contact: Flush with water for 15 minutes. Consult a
physician.

INGESTION: Consult a physician.

***** SECTION VI-REACTIVITY DATA *****

STABILITY: Unstable X Stable

INCOMPATIBILITY (Materials to Avoid): Avoid contact with water, alcohols,
amines, and other materials which react with isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS: By fire CO₂, CO, Oxides of Nitrogen,
possibility of cyanides.

Hazardous Polymerization May occur X Will not occur

Conditions to Avoid:

***** SECTION VII-SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Cover the spill with absorbent material, such as sand, sweeping compound or diatomaceous earth; collect material in open top drum and take to isolated area, out of doors preferred, fill drum with water; neutralize spill area with dilute solution of ammonium hydroxide.

WASTE DISPOSAL METHOD: Waste material can be incinerated or disposed of in accordance with Federal, State or Local regulations regarding environmental control after allowing time for reaction with water.

***** SECTION VIII-SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION: Use a respirator that is approved or recommended for use in isocyanate containing environments (air purifying or fresh air supplied)

VENTILATION: Where employees may be exposed, provide general dilution or local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients in Section II below recommended (ACGIH) or regulated (OSHA) limit. Where employees will not be exposed, keep LEL in Section II below 25% of limit.

PROTECTIVE GLOVES: Butyl rubber preferred. Neoprene or nitrile acceptable.

EYE PROTECTION: Splash proof goggles and/or face shield.

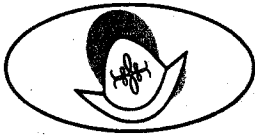
OTHER PROTECTIVE EQUIPMENT: Protective clothing such as butyl rubber apron. Neoprene or nitrile acceptable. A safety shower, an eye bath, and washing facilities should be available.

***** SECTION IX-SPECIAL PRECAUTIONS *****

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: Keep away from heat, sparks, and open flame. Store in tightly closed container and protect from moisture and foreign materials. At max. storage temperature noted, material may slowly polymerize without hazard. Ideal storage temperature range is 10°C. - 27°C. (50°F. - 81°F.)

OTHER PRECAUTIONS: Inhalation of isocyanates can cause allergic sensitization. Symptoms may include mucous membrane irritation, tightness of chest, irritation of respiratory tract, coughing, headache and shortness of breath. Asthma-like attacks may follow. See Section VIII instructions.

Prepared by:
R. A. Prokop



DeSoto, Inc.

ADMINISTRATIVE AND RESEARCH CENTER

1700 SOUTH MOUNT PROSPECT ROAD, DES PLAINES, ILLINOIS 60018 TELEPHONE 312-391-9000

December 17, 1982

Occupational Safety Dept.
Attn: Industrial Hygiene
Douglas Aircraft Co.
Mail Code: Cl-121 (126-14
3855 Lakewood Boulevard
Long Beach, CA 90846

SUBJECT: 2-ETHOXYETHYL ACETATE

Dear Sirs:

Our records indicate that since January 1, 1982, you have purchased products from DeSoto containing 2-ethoxyethyl acetate. Our suppliers of this product have alerted us to the unpublished results of tests conducted by the National Institute of Occupational Safety and Health (NIOSH). A paper by B.K. Nelson of NIOSH summarizing the findings has been submitted for publication in Teratology.

NIOSH investigated the teratogenic potential of a number of industrial chemicals including 2-ethoxyethyl acetate (also known as ethylene glycol mon-ethyl ether acetate or Cellosolve (R) Acetate). The significant tests on 2-ethoxyethyl acetate were inhalation studies in rats at exposures of 130, 390, and 600 ppm. According to the preliminary findings, the following effects were observed: complete resorption of litters were induced at 600 ppm, reduced fetal weights and skeletal and cardiovascular defects were observed at 390 ppm and a single cardiac malformation was observed at 130 ppm.

For comparison, the current threshold limit value (TLV (R)) as adopted by the American Conference of Governmental Industrial Hygienists (ACGIH) is 50 ppm (8-hour time weighted average). However, ACGIH in June, 1982 has announced a Notice of Intended Change in its recommended TLV to 5 ppm, thus beginning the two year process of evaluating such a change. The current OSHA standard remains at 100 ppm (8-hour TWA).

DeSoto, Inc. is not aware of any evidence indicating that 2-ethoxyethyl acetate has caused reproductive effects in humans. However, because of our belief that knowledge of the most current available information regarding a material's toxicological properties is essential in establishing safe handling procedures, it is our practice to communicate such information to our customers when it becomes known to us.



DeSoto, Inc.

Douglas Aircraft Co.
December 17, 1982
Page two

Enclosed you will find updated Material Safety Data Sheets for DeSoto products you have purchased since January 1, 1982 which contain 2-ethoxyethyl acetate. The Material Safety Data Sheets contain handling procedures which can serve as a basis for the safe handling and use of these products. We recommend that you evaluate your operation to determine if actions are required to reduce employee exposure to 2-ethoxyethyl acetate.

Please insure that this information is given to the person(s) in your company responsible for health and/or safety. If additional information is required, please contact Ms. Carol Robinson of our Corporate Industrial Hygiene Services at 312-391-9547.

Respectfully yours,

DeSOTO, INC.

E.H. Hoerster
Director of Marketing
Chemical Coatings Division

Enclosures: MSDS's for 020-730; 020X304; 020X343; 515X005; 821X331
821X481; 822X324; 822X419; 822X420; 826X321
826X445; 828X310; 910X376; 910X480

cc: R.A. Prokop
C. Robinson